

Amendments to the Claims:

1. (Currently Amended) A hydrogen supply system, comprising:
a hydrogen supply station; and
a mobile hydrogen production system having a membrane reformer that is capable reforming fuel and separating hydrogen from reformed fuel to thereby produce a hydrogen stream and an off gas stream, wherein the off gas stream is used as a heat source for the membrane reformer;
wherein the hydrogen supply system supplies hydrogen produced by the mobile hydrogen production system to the hydrogen supply station.
2. (Original) The hydrogen supply system according to claim 1, wherein the hydrogen supply station is a hydrogen supply station for a fuel cell powered automobile.
3. (Original) The hydrogen supply system according to claim 1, wherein the hydrogen supply station is a hydrogen supply station for distributed fuel cell equipment.
4. (Previously Presented) The hydrogen supply system according to claim 1, wherein the membrane reformer comprises a hydrogen separation membrane that is capable of generating hydrogen having a purity as high as 99.999% pure.
5. (Previously Presented) The hydrogen supply system according to claim 1, wherein the mobile hydrogen production system comprises an evaporator.
6. (Previously Presented) The hydrogen supply system according to claim 1, wherein the mobile hydrogen production system comprises a desulfurizer.
7. (Previously Presented) The hydrogen supply system according claim 1, wherein the mobile hydrogen production system comprises a prereformer for decomposing a higher hydrocarbon into a lower hydrocarbon.
8. (Previously Presented) The hydrogen supply system according to claim 7, wherein the lower hydrocarbon is a hydrocarbon with a low molecular weight.

9. (Previously Presented) The hydrogen supply system according to claim 1, wherein the mobile hydrogen production system comprises a compressor unit for compressing hydrogen.

10. (Previously Presented) The hydrogen supply system according to claim 1, wherein the mobile hydrogen production system is configured to produce hydrogen by being supplied with two or more kinds of material.

11. (Previously Presented) The hydrogen supply system according to claim 1, wherein the mobile hydrogen production system comprises a material tank.

12. (Previously Presented) The hydrogen supply system according to claim 1, wherein the mobile hydrogen production system comprises a hydrogen tank.

13. (Previously Presented) The hydrogen supply system according to claim 1, comprising hydrogen supply stations at two or more locations, wherein the mobile hydrogen production system moves to the hydrogen supply stations.

14. (Previously Presented) The hydrogen supply system according to claim 1, wherein the mobile hydrogen production system comprises a driving mechanism using a fuel cell, and a material tank for supplying material to be converted to hydrogen, wherein the produced hydrogen is utilized for the running of the mobile hydrogen production system.

15. (Previously Presented) The hydrogen supply system according to claim 1, wherein the mobile hydrogen production system comprises a CO₂ recovery unit.

16. (Previously Presented) The hydrogen supply system according to claim 4, comprising a CO₂ absorbent in the mobile hydrogen production system for absorbing CO₂ from the reformer to reduce CO₂ emission, and an absorbent regeneration base for regenerating used absorbent and recovering CO₂.

17. (Original) The hydrogen supply system according to claim 16, wherein the regenerated absorbent is utilized to absorb CO₂ in the mobile hydrogen production system.

18. (Currently Amended) A mobile hydrogen production system, comprising a hydrogen production unit loaded on the system, the unit further comprises:

a membrane reformer that is capable reforming fuel and separating hydrogen from reformed fuel to thereby produce a hydrogen gas stream and an off gas stream, wherein the off gas stream is used as a heat source for the membrane reformer;

- a hydrogen compressor;
- a hydrogen tank;
- a boiler;
- a CO₂ solvent tank; and
- a material tank.

19. (Previously Presented) The hydrogen supply system according to claim 1, wherein the mobile hydrogen production system comprises:

- a membrane reformer;
- a hydrogen compressor;
- a hydrogen tank;
- a boiler;
- a CO₂ solvent tank; and
- a material tank.

20. (New) A mobile hydrogen production system comprising:

a booster having an inlet for receiving a gas to be reformed, the booster being configured to compress the gas;

a prereformer disposed downstream of the booster and configured to receive compressed gas from the booster, the prereformer including an inlet for receiving steam from a boiler,

wherein the compressed gas and steam react at a temperature of about 300 to 500° C in a water vapor reforming reaction;

a membrane reformer disposed downstream from the prereformer and configured to receive the prereformed gas from the prereformer, the membrane reformer being configured to produce a reformed fuel and to separate hydrogen from the reformed fuel to thereby produce a hydrogen gas stream and an off gas stream, wherein the off gas stream is used as a heat source for the membrane reformer;

a heat recovery unit for receiving and cooling the hydrogen gas stream;

a compressor disposed downstream of the heat recovery unit for compressing the hydrogen gas stream; and

a storage container for receiving and storing the compressed hydrogen gas stream.

21. (New) The mobile hydrogen production system of Claim 20, wherein a desulfurizer is disposed between the booster and prereformer.

22. (New) A mobile hydrogen production system for reforming a liquid fuel into hydrogen gas, the system comprising:

a booster having an inlet for receiving a liquid fuel to be reformed, the booster being configured to compress the fuel;

an evaporator disposed downstream of the booster and configured to receive a mixture of compressed fuel and water from the booster;

a membrane reformer disposed downstream from the evaporator and configured to receive the mixture of compressed fuel from the evaporator, the membrane reformer being configured to produce a reformed fuel and to separate hydrogen from the reformed fuel to thereby produce a hydrogen gas stream and an off gas stream, wherein the off gas stream is used as a heat source for the membrane reformer;

a heat recovery unit for receiving and cooling the hydrogen gas stream;

a compressor disposed downstream of the heat recovery unit for compressing the hydrogen gas stream; and

a storage container for receiving and storing the compressed hydrogen gas stream.